

### **ABSTRACT OF THE DISCLOSURE**

The invention provides a radiation sensor including a housing, an attenuator with at least one cavity for attenuating optical radiation, and a detector, as well as an optical attenuator including an attenuator body, an entrance with one multi-stage input opening or plural input openings, and means for transferring radiation inside of the attenuator body and then to a detector. The invention further provides methods for using the radiation sensor or the optical attenuator.